Appl. No. 10/040,092 Amdt. dated 02 Mar 04 Reply to Office action of 02 Dec 03

In the Claims:

This listing of claims replaces all prior versions and listings of the claims in this application:

1. (CURRENTLY AMENDED) <u>A method An apparatus</u> for casting metal strip <u>using</u>, comprising a casting roll, a metal delivery system to deliver molten metal onto the casting surface of the casting roll and a roll brushing apparatus to clean the casting roll surface, the <u>method brushing apparatus</u> comprising the steps of:

at least one brush-mounting frame;

rotating a rotary main brush mounted on one said mounting frame to extend across the casting surface of the casting roll to and capable of tangentially engageing the peripheral longitudinal casting roll surface of the casting roll;

rotating an elongate rotary sweeper brush mounted on one said mounting frame to extend across the casting surface of the casting roll to and capable of tangentially engageing the casting roll surface of the casting roll in advance of the position of the main brush relative to the casting surface of the casting roll;

<u>driving the rotation of a sweeper brush drive operable to rotate</u> the sweeper brush in a direction opposite to the surface movement of the casting roll;

moving a sweeper brush actuator on one said mounting frame to move the sweeper brush independently of the main brush into engagement with the casting roll surface of the casting roll near the beginning and end of each casting run and to disengage from the casting roll during normal casting operation; and

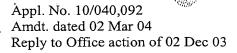
moving a main brush actuator on one said mounting frame to move the main brush into engagement with the casting roll surface at least during normal casting operation.

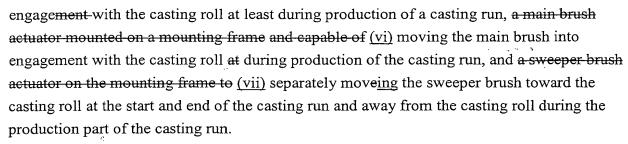
- 2. (currently amended) <u>A method An apparatus</u> as claimed in claim 1, wherein <u>a the</u> sweeper brush is rotatably mounted on a brush mounting structure connected to <u>a the</u> sweeper brush actuator.
- 3. (currently amended) A method An apparatus as claimed in claim 2, wherein the sweeper brush actuator and the main brush actuator comprise fluid actuable cylinder devices.
- 4. (currently amended) An apparatus as claimed in claim 2, further comprising an elongate scraper mounted on <u>a</u> the brush mounting structure to move with the sweeper brush and engaging the sweeper brush so as to scrape swept material from the sweeper brush.



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- A method An apparatus as claimed in claim 4, 5. (currently amended) wherein the sweeper brush comprises a central brush body and a plurality of bristles projecting radially outwardly from the central body and forming collectively a substantially cylindrical shape and the scraper comprises an elongate scraper blade projecting into the bristles of the brush.
- A method An apparatus as claimed in claim 5, 6. (currently amended) wherein the bristles are formed of steel wire.
- A method An-apparatus as claimed in claim 6, 7. (currently amended) wherein the scraper blade is made of hardened steel.
- A method An apparatus as claimed in claim 1, 8. (currently amended) wherein the main brush is an elongate rotary brush and the main brush mounting frame carries main brush drive operable to rotate the main brush.
- A method An apparatus as claimed in claim 1, 9. (currently amended) further comprising a main brush drive operable to rotate the sweeper brush in a direction opposite to the movement of the casting surface of the casting roll.
- A method An apparatus as claimed in claim 1, 10. (currently amended) wherein the sweeper brush is rotatably mounted on a sweeper brush mounting frame connected to the brush actuator and the sweeper brush drive is mounted on the brush mounting frame to move with the sweeper brush.
- A method An apparatus as claimed in claim 1, 11. (currently amended) wherein the main brush mounting frame is moveable toward and away from the roll surface to move both the main brush and the sweeper brush between retracted and operative positions.
- A method of An apparatus for casting metal strip 12. (currently amended) using, comprising a casting roll metal delivery system to deliver molten metal onto the surface of the casting roll and roll cleaning brush apparatus to clean the casting roll surface, the method brushing apparatus comprising the steps of: (i) rotating a main brushing device extending across the roll capable of tangentially engaging the peripheral longitudinal roll surface, (ii) rotating and a second sweeper brushing device extending across the roll to engage the roll in advance of the main brushing device, the sweeper brushing device comprises an elongate rotatably driven barrel brush extending across the roll surface of the casting roll and mounted on a mounting frame, capable of (iii) engaging the casting roll in advance of the position of engagement of the main brushing device with the casting roll independent of the engagement of the main brushing device with the casting roll, (iv) driving the sweeper brush-being driven to rotate in a direction opposite to the surface movement of the casting roll, (v) rotating the main brushing device mounted on a mounting frame is mounted to rotate about its longitudinal axis and capable of being rotatably driven in to





- 13. (currently amended) A method An apparatus as claimed in claim 12, wherein <u>a the</u> main brush actuator and <u>a sweeper brush actuators are provided comprisinge</u> fluid actuable cylinder devices.
- 14. (currently amended) <u>A method An apparatus</u> as claimed in claim 12, further comprising an elongate scraper extending along the barrel brush and engaging the barrel brush so as to scrape swept material from the barrel brush.
- 15. (currently amended) <u>A method An apparatus</u> as claimed in claim 14, wherein the scraper is fixed to <u>a the sweeper brush</u> mounting frame <u>for the sweeper brush</u>.
- 16. (currently amended) A method An apparatus as claimed in claim 12, wherein the sweeper brush comprises a central brush body and a plurality of bristles projecting radially outwardly from the central body and forming collectively a substitute cylindrical shape.
- 17. (currently amended) <u>A method An apparatus</u> as claimed in claim 16, wherein the bristles are formed of steel wire.
- 18. (currently amended) A method An apparatus as claimed in claim 16, wherein the scraper comprises an elongate scraper blade projecting into the bristle canopy of the barrel brush.
- 19. (currently amended) <u>A method An apparatus</u> as claimed in claim 18, wherein the scraper blade has a sharp leading edge.